

adjustment control value and color balance adjustment
control value obtained from the color balance data
recorded together with the image pickup data in the
image file. Attached data of image files recorded in a
5 plurality of scenes can be easily selected and
repeatedly used. The user can freely express an image
by easily changing the color tincture of the pickup
image.

More specifically, MWB white sheet data is read
10 out to perform white balance adjustment. The same
white sheet data or another white sheet data also can
be read out to perform color balance adjustment. Thus,
attached data of image files recorded in a plurality of
scenes can be easily selected and repeatedly used. The
15 user can freely express an image by easily changing the
color tincture of the pickup image.

Fig. 4 is a block diagram showing the main part of
an image pickup apparatus according to the fourth
embodiment. This embodiment will explain a method of
20 recording part of picked-up image as gain control data
for MWB and color balance adjustment in an attached
data area of each image file, performing adjustment
operation so as to use the gain adjustment data in any
image pickup apparatus and perform MWB adjustment and
25 color balance adjustment in recording each pickup image
on a recording medium.

A method of extracting some data from image pickup

data and recording the extracted data as data for MWB or color balance adjustment in an attached area of each image file is the same as in the first embodiment, and a detailed description thereof will be omitted.

5 According to the characteristic feature of the fourth embodiment, image pickup element fluctuation adjustment data recorded in an image pickup element fluctuation adjustment data recording area (memory) or adjustment data unit 419 of this image file as data
10 obtained by picking up images of a white sheet under each of two different specific light sources are recorded in a specific part of the attached area.

 Image pickup element fluctuation adjustment data, i.e., image pickup data 1203 and 1205 of two different
15 light sources obtained by using a reference image pickup apparatus shown in Fig. 10 and image pickup data 1204 and 1206 of two different light sources unique to each image pickup apparatus for each color component of R, G1, G2, or B, are recorded by the adjustment data
20 unit 419 in the area attached to the image file. This embodiment uses two different light sources. However, adjustment precision is improved when the number of types of light sources increases. Although the adjustment precision is not improved so much, the image
25 pickup element fluctuation adjustment can be also attained by using only one kind of light source.

 These image pickup element fluctuation adjustment

data which is written in the memory of each image pickup apparatus at the time of shipment, are read out by a readout means (not shown) in each image pickup operation and then written in a single file together
5 with the MWB white sheet data and color balance data.

The average value of all or some image pickup data for each color component of R, G1, G2, or B, obtained when picking up the image of a light source, is used as such image pickup element fluctuation adjustment
10 operation data.

As in the above three embodiments, when the attached data of a file selected by a selection data reproduction unit 410 shown in Fig. 4 is read out, the fluctuation adjustment data are also read out and
15 reproduced.

An adjustment operation unit 420 adjusts these fluctuation adjustment data in the following manner and supplies the resultant data as R, G1, G2, and B data for MWB or color balance adjustment to a gain control
20 value operating unit 4111. The gain control value operating unit 4111 calculates gain control values for MWB and color balance adjustment.

Referring to Fig. 10, an image pickup apparatus 1201 records MWB and color balance adjustment data on a
25 medium. An image pickup apparatus 1202 reads out the MWB and color balance gain adjustment data recorded on the recording medium and performs gain adjustment.